Vol 4 No 4

The Australian COMMODORE REVIEW

April $3*

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BEEMAN MAYRHOFER STOTT/CC422

The Australian Commodore Review Vol 4 No 4 April 1987
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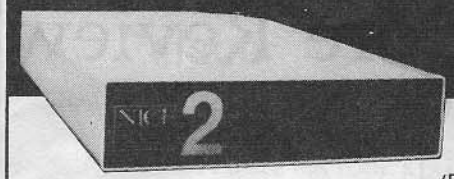

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The Australian Commodore Review
Top Rear, 4 Carrington Road, Randwick, NSW 2031.
Phone: (02) 398 5111.
Published by: Saturday Magazine Pty Ltd.
Editor: Andrew Farrell
Advertising:
Ken Longshaw (02) 398 5111
Production: Brenda Powell
Layout: Tina Spathos
Subscriptions & back issues:
Nancy DelValle (02) 398 5111
Distribution: NETWORK
Printed by: Ian Liddell Commercial Printing

Editorial

Andrew Farrell

Commodore is moving up market, and so are you. It's all about power, and how to get more of it. Businesses need it, but strangely enough, so do the hobbyists want it. More memory, unlimited disk storage, faster access times, greater processing ability - are all being unleashed, be it in small amounts, upon the entire computing spectrum.

With the AMIGA 500 priced at under $1000, graphics and sound that wouldn't have been imagined one year ago, are available to the low end of the computer market. You and me.

Multi-tasking power is taking home computing into new realms. But the whole show is leaning heavily on software. The technology is here, and the market is eager to see it all come together.

Dealers are importing products directly from the US, Germany and Great Britain. But if the 500 sells in the quantities Commodore is predicting, the demand will far outweigh their ability to import limited quantities of items.

The Commodore 64 too is enjoying a new lease on more serious computing ability. GEOS is being well supported, with half a dozen new titles available over the next two months. New printers, more powerful peripherals and even word of memory expansion are clear indications that the whole Commodore market is under going a radical step toward more serious applications.

Not spreadsheets, databases or wordprocessing - although they are indeed playing a part in the shift - but in uses that are only just being discovered. Music, Art, Communications, Video, Advertising, Publishing and the list grows. It's an exciting time we plan to keep up with, so keep reading!

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RAM RUMBLING$

Commodore announces Club Amiga

Following the outstanding success of the Amiga computer, Commodore has announced a national organisation to help Amiga users make the most of their computer.

CLUB AMIGA has been launched to provide special support and discounts for Amiga owners.

Commodore Special Projects manager, Mr Craig Tegel, who developed the concept said,

"The Amiga is a special computer and Club Amiga will be a special service giving members product security and support."

Club Amiga will give members up-to-date information on the latest developments on the Amiga - both with software and hardware - as well as regular product reviews.

Members will receive quarterly newsletters about the Amiga as well as a twelve month subscription to *Amiga World Magazine,* which is dedicated to Amiga software and hardware developments and distributed internationally.

When joining, members will receive a special kit containing a personal membership card and key ring which will entitle owners shortly to special discounts and offers, not available to people outside Club Amiga.

The kit comes with three demonstration disks, *Superbase Personal, Deluxe Video Construction Set* and *Pagesetter.* A recent edition of the publication *Amiga World* is also included.

As a special Bonus Offer for new members, each will receive free a copy of the *Textcraft* or *Graphicraft* program worth $99.

The total value of the newsletters, magazines and software give aways contained in the Club Amiga kit is nearly $200.

However the substantial discounts and offers which will be made to club members over the next 12 months will amount to many hundreds of dollars.

Mr Tegel said, "Club Amiga will allow us to support Amiga users to a level they deserve.

"I am extremely confident it will be a success from the start. There have been more than 10,000 Amigas sold in Australia since it was launched less than a year ago, and I believe their owners will take advantage of this generous offer to form Club Amiga."

Commodore expects Club Amiga will initially have a membership of 3,000 and this will grow steadily as more Amigas are sold.

Club Amiga has a joining fee of $50 plus an annual subscription fee of $100.

Membership of the club is open only to Amiga users and anyone wishing to join should apply to Mr Tegel at Commodore's Australian headquarters, 67 Mars Rd, Lane Cove 2066.

Amiga User Association

The Australian Amiga User Association was formed in 1986 by Commodore Amiga users to cater for the interests of owners of the new Amiga range of computers.

The aims of the Association are the interchange of knowledge on hardware, software, education, business and all related applications, so as to promote full and further development and use of the Amiga range of computer systems.

The Association has extensive connections with both Commodore and overseas Amiga user groups. This allows the dissemination to members the latest information relating to hardware, software or any other Amiga relevant subject.

Open days are held periodically consisting of discussions on news, demonstrations/reviews of the latest in hardware and software, as well as talks and lectures on programming or many other Amiga related subjects, all held in the atmosphere of a social function for members and their families.

Members are posted bi-monthly newsletters which contain the latest in news, articles, reviews, and other topical information relating to the Amiga, gathered from the association's above-mentioned sources.

A 24 hour multi mode (V21,22,23) Bulletin Board Service is operated by the association on (047) 58 8006 which is accessible to subscribing members with limited access to visitors. This BBS features full facilities for private and public messages, news and the exchange of Public Domain Software.

For further information or details on membership etc. please write to: Australian Amiga User Association c/- Post Office Penrith, NSW 2750. Or contact the president or secretary on (047) 39 6182, or treasurer on (047) 51 4143. Alternatively the Association can also be contacted via Viatel message page 473534880.

Commodore Connection

A new service is now operating on Viatel called the Commodore Connection. The service provides apart from information a multi-user bulletin board, telesoftware, a news and magazine section, and more.

The news service is updated as the news comes in, and is second only to *The Australian Commodore Review.*

The telesoftware section will contain public domain and commercial software for the Commodore 64, 128 and Amiga personal computers.

A lack of information on Commodore servicing has been a problem until now, but this and more general information on Commodore equipment will be available for use free of charge to members.

This service may be found on page *6917# of Viatel.

LETTERS

TO THE EDITOR

Dear Sir,

I'm writing to you in response to an article appearing in your magazine Vol 2 No 2 of February, 1987, titled "Rich Man, Poor Man, Beggar Man, Pirate". I, like many others, are concerned with the pirating of computer software, and in essence agree with the article you wrote.

However, I do resent the inference in your test as 'User Groups' being the vessel for pirating.

I am a member of the Southport Commodore User Group which is situated on the Gold Coast, Queensland, and would like to state that one of the main priorities in our club, is that club members are not allowed to copy commercial software.

I have enclosed a photocopy of a page from our magazine "The Computer News". The section referred to is concerning an ex-member who is no longer welcome at our club and a warning to other members who may be contemplating similar activities. As you can see from the text, we refer to previous articles referring to existing club policy of no copying.

I have also enclosed a copy of our club's constitution which states the ideals and operations of our club. As you can see, the User Group has been established with specific purposes, and has set its own ideals to fulfill.

I think that if you contacted other groups, you would find that they hold similar policies to us, and strive to fulfil the same type of ideals.

I strongly feel that rather than accuse almost everybody, seeking the co-operation of the User Groups would be a more logical step, rather than upsetting them. I think your section on how to spot pirates should be amended to swap clubs and not the legitimate user groups.

I would like to offer to your magazine, space in our own publication to reprint any articles or warnings to people who may copy software. I would also like to extend this offer to any software companies whom you may liase with.

Rick Bone
Editor, Computer News

Excerpt from Computer News

A few weeks ago I rang up one of our members to let him know that his 'Subs' were due. I was in for a shock! This guy would have to be one of the regular attenders of our club (up to the subs running out) and he informed me that he wouldn't be renewing his membership. When I asked the reason why he told me he had joined another club on the Gold Coast where they all got together to do COPYING of programmes and that was why he had left our club, BECAUSE WE WON'T LET THEM COPY COMMERCIAL PROGRAMMES!

It seems as though the club policy of NO COPIES! is working. Maybe we can get rid of a few more.

ED: *It is commendable to see a user group with such a responsible attitude, it is only a shame that there are not more similarly minded. In the article you refer, to reference was made to user groups in connection with the piracy problem.*

"More often than not the modern day pirate's clipper is the 'User Group'..."

"..they sometimes turn into full scale swap clubs where even pre-release version of programs are readily available to all and sundry."

Please note that the intended meaning was that where mass distribution of pirated software is a problem, the medium used is often that of the user group, occasionally for financial gain. In no way do I believe that most user groups indulge in such activity - only that most pirates enjoy the fluid surrounds of user group meetings to provide an outlet for their programs.

Addressing this problem is difficult, especially from our position. To all those User Groups who provide a fine service for their members, my sincerest congratulation on a job well done. To the rest - I echo all my previous sentiments.

I do not condemn the copying of software as such - something that we all do to some hopefully small extent. However, what kills the market for software and thus the continuing life of the industry is the mass distribution of pirated material. Especially where this is for financial gain do I take offence - an illegal pastime that is now being attended to.

MicroAccessories of S.A.

THE UTILITY SPECIALISTS

Amiga

Following the outstanding success of the Amiga computer, Commodore has announced a national organisation to help Amiga users make the most of their computer.

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FAST LOAD PLUS UTILITY CARTRIDGE

After enjoying considerable success since its release we have now made some improvements to "QUICKDISC+" to maintain its position as the best value in the disc "speed up/utility" cartridges.

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Fast SAVE at 7 times normal speed.

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A RESET switch is fitted (We have found this to be "unstoppable" - it even preserves the tape buffer)

NO MEMORY IS USED by this cartridge, it is totally "transparent" and uses special switching techniques.

"128" and 1570 compatible in '64 mode.

PLUS MANY MORE USEFUL FEATURES TO MAKE YOUR 1541 FAR MORE FRIENDLY TO OPERATE.

ONLY $49.95

When reviewing "Quickdisc+" Commodore Horizons said "A MUST FOR EVERY 1541 OWNER".

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NOW HANDLES PROGRAMS THAT LOAD SUBSEQUENT PARTS

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Now the **"MKIII" version** has moved "Freeze Frame" well ahead of the "opposition". As well as its unfailing skill in handling **every memory resident program** available for testing up to 1st July 1986 it will now transfer from tape to disc the vast majority of **programs that load subsequent parts.**

FEATURES

- TAPE TO DISC
- DISC TO DISC
- COMPLETELY SELF CONTAINED, NO EXTRA SOFTWARE NEEDED
- FILES COMPRESSED FOR ECONOMY OF STORAGE SPACE
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- TAPE TO TAPE
- DISC TO TAPE
- RELOAD INDEPENDENT OF THE CARTRIDGE
- NOW HANDLES PROGRAMS THAT LOAD EXTRA PARTS
- PROGRAMS RESTART FROM THE POINT BUTTON IS PRESSED

OPERATING "FREEZE FRAME"

"Freeze Frame" is **simplicity itself** to use. It is cartridge based so is simply plugged into the cartridge port. When the computer is switched on a message is displayed, pressing "RETURN" will clear the computer back to the normal start up screen. Software can now be loaded from tape or disc **completely as normal.** The latest version of "Freeze Frame" will, to the best of our knowledge, allow **ANY software** to load and run normally (unlike competitive products).

"Freeze Frame" can be brought into operation at any convenient point by **pressing the button** on it. You can then do one of three things -

1. **Pressing "D" will save a working version of the program in memory to a formatted disc. This version will include an auto booting very high speed reload (many programs reload in less than 30 secs).**
2. **Pressing "S" will save to disc with a standard reload speed that can be used by non 1541/70/71 drives U.S. spec. machines, etc., but perhaps more importantly by most fast load cartridges and systems. Use "Dolphin DOS" to reload anything in less than 10 secs. (Also suitable for U.S. spec. machines.)**
3. **Pressing "T" will save a working version of the program in memory to tape. This incorporates a high speed reload at approx. 2400 baud.**

IT'S AS SIMPLE AS THAT

ALL PROGRAMS SAVED WITH "FREEZE FRAME" CAN BE RELOADED INDEPENDANTLY OF THE UTILITY

ONLY $99.00

Owners of earlier versions can return them and upgrade for $15 + PP.

SERIOUS WARNING: THIS IS AN EVER... AND IT STIL...

"DISCO" will transfer standard speed tape to disc

"TRANS QD" allows you to save a fast load system to your own discs

"DOUBLE BACK UP" is a **very fast** two drive back up

As well as these important newcomers all the old favourite utilities which have helped earn "Disector" such a large following are included. These include **Menu Maker (selective), Fast Format, Unscratch, Disc Monitor, Disc Orderly, Fast File Copy, Index, etc., etc.**

The whole package is menu driven and has its own fast boot system built in for your convenience. Pays for itself the first day you receive it.

ONLY $49.95

Programs are CBM 128 and 1570/71 compatible in '64 mode.

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ANTIKNOCK DEVICE

This package incorporates a new drive stop for your 1541 that will end for good the dreaded "woodpecker". The fitting is very easy and a test program is provided to check the fitment. Helps prevent future alignment problems and makes your drive purr with satisfaction.

AND THEN THERE WAS

DOLPHIN

Like everyone that has had the pleasure of see... operation you will be amazed by both the s... use. It is compatible with the majority of com... speeding up both the program loading and SE... Fitting requires the insertion of two sub assem... in the 1541 and one in the '64/'128. This do... entail soldering, although a small amount w... with some machines.

ONLY $169.95

If you require further information please send SA...

Operates with the CBM 64 or 128 in '64 mode w...

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Amiga 500 -
Commodore's next market boomer

Thomas J. Rattigan has just put the fizz back into Commodore, with the release of the Commodore Amiga 500, priced at a mere $999. Andrew Farrell pops the top on this newly positioned home machine.

When the Amiga 1000 was launched in Australia a little over six months ago, it was heralded as one of the most forward home machines available in the market at the time. However, as time progressed it became apparent that despite the technical advancement that had been made in the Amiga, it just wasn't cracking it in the real world of price/performance conscious buyers. Something had to be dome to make Amiga more acceptable in the business market.

So the Amiga 2000 was built - and that's another story. Of more importance was the high volume home market where initial sales, upgrades and second machine purchases were being lost to competitors because of the Amiga's higher price tag.

Commodore set out to make the Amiga more affordable. They started by redesigning the circuit board to accommodate a lower chip count made viable due to their vast wealth of experience in designing made-to-order chips.

A newfangled casing was drawn up that would be simpler to manufacture. A simpler power supply using the regular brick type scheme replaced the Amiga 1000's reliable switch mode unit. And finally the composite video circuit was replaced with an unpretentious monochrome circuit.

These changes have made it possible to reposition the Amiga into a new area of the market place not unlike that originally entered by the Commodore 64 five years ago.

Kickstart 1.2, the Amiga's supervisor or operating system, is now built into ROM rather than being loaded off a disk when you first switch the unit on. The integral keyboard is a little different from its predecessor, however, still boasts the complete complement of function keys, cursor keypad and numeric keys. A more spacious layout is also much welcome.

Standard RAM size is 512K, expandable up to 1Megabyte on board via a slot accessible on the machine's underside. The positioning of this slot has meant that many Amiga peripherals will now no longer connect directly to the side of the unit as they did with the Amiga 1000. However, by way of a short cable, and perhaps some form of expansion unit, it would be possible to add all existing Amiga add ons including hard disks, Sidecar and the like.

The 500 produces RGBI and RGBA output for use with high grade monitors, whilst the monochrome output can be used to drive cheaper units. An external adaptor will also be available to allow the 500 to be used on a standard UHF colour television or colour composite video device such as a VCR.

At this time there are no plans for a Commodore 64 emulation card, despite rumors to the contrary. Interestingly, the same has been achieved using software, however this proved to be rather sluggish when used with some of the Commodore 64's high speed games - which goes to prove that the 64 really is quite a smart

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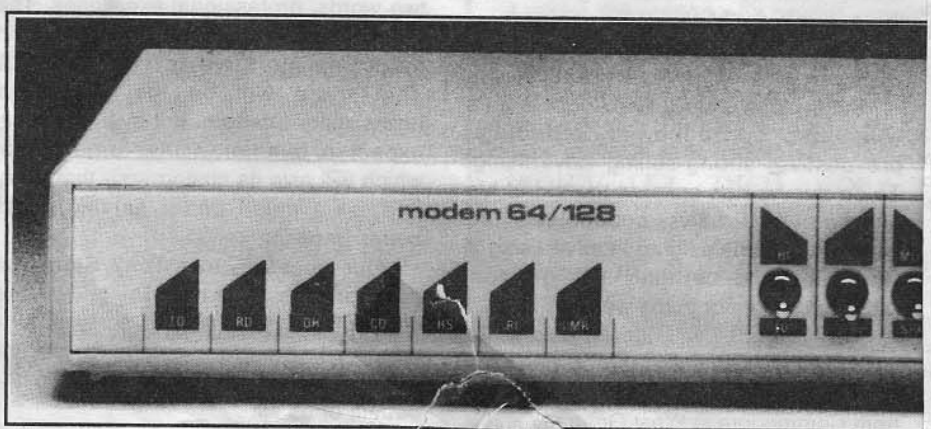
Operation

Having loaded the terminal program, otherwise known as *GP Term*, from disk at turbo speed thanks to the built in fast DOS, control of the various operations is achieved by way of the function keys.

Videotex pages may be captured, an auto-dial menu edited and saved, baud rates fine tuned, and programmable keys defined. And that's just the start. I would compare the facilities of this package with *VIP Terminal* only that this one is

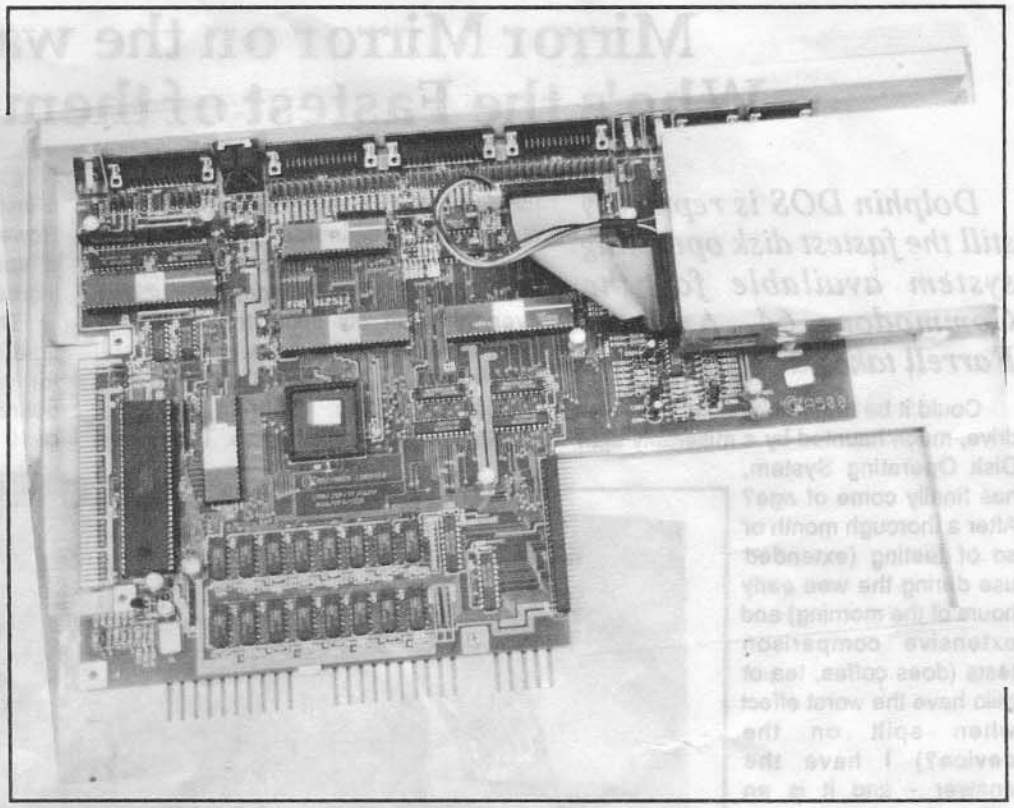
letter box for a week (promotional material included for your appraisal, free you're using version 1.0.



computer.

Will the Amiga 500 make up for lost ground in the home computer stakes? My guess is an affirmative yes, providing that third party software houses start to pay more attention to the Amiga. At the moment new software packages are arriving in a trickle, but what the Amiga needs is some strong well written and promoted programs that can really bump the image of this machine out of the vertical market slow and into a more readily accepted position.

Tony Cuffe, Product Manager at Commodore Australia, promises me that such programs do exist. If they arrive in the market place in the month of May, they will be accompanying many Amiga 500 sales out the dealer doors. If not, we may see the 500 having difficulty gaining the level of acceptance it deserves.



Commodore Chief's Challenge

Commodore International President, Mr Thomas J. Rattigan, believes computer retailers in Australia will be increasingly challenged to survive what he believes will be tough times ahead. However, Mr Rattigan said Commodore with its extensive and varied range of computer products will give many of these retailers an opportunity to stay competitive and profitable.

"The industry has undergone major retrenchments in the past two years in both the United States and Europe and I believe Australian retailers will start feeling the pinch in 1987," he said.

Mr Rattigan sees the scenario this way:

"The local industry has seen a slowing in unit sales growth and modest growth, at best, is expected in the near future.

"There has been increasing margin pressure as retailers reduce prices to remain ahead of their competition.

"This is happening in a country which has too many computer outlets; 16 per cent of the U.S. store level, but only 2-3 per cent of U.S. unit sales.

"Added to this is the influx of clone computers from Asia with no real distinction versus one another, other than price, and you have a volatile situation.

"If you like, you are reaching the situation where everybody is selling vanilla ice-cream, with sales increasingly determined by price alone."

Unless retailers here deal with products such as the Amiga 2000, that offer proprietary technology, and

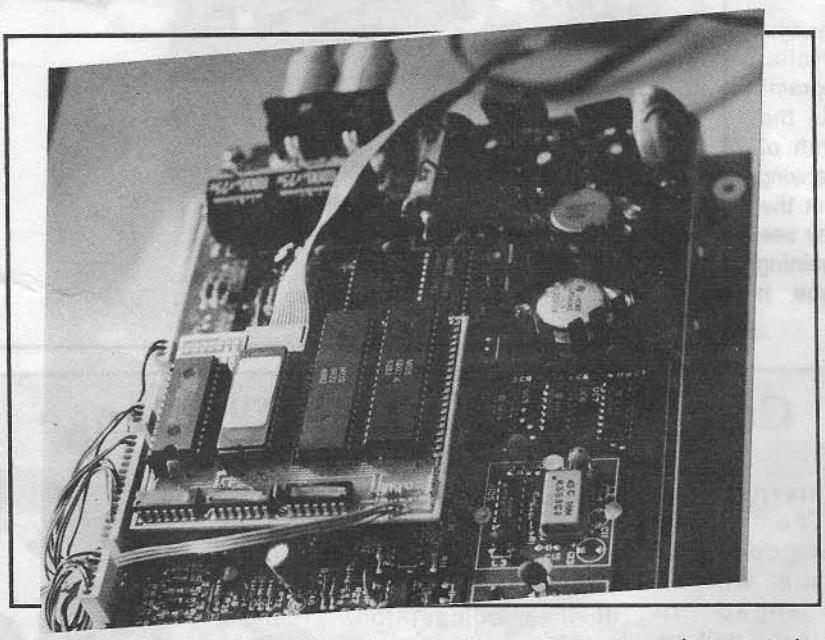
that can be distinguished other than in value alone, then the result will be a major shake-out in the industry, possibly leaving only half the number of computer shops which exist today, said Mr Rattigan.

So Commodore expects more hard times, just when we thought things werre sorting themselves out.

Mirror Mirror on the wall, Who's the Fastest of them All?

Dolphin DOS is reputedly still the fastest disk operating system available for the Commodore 64. ***Andrew Farrell*** *takes a second look.*

Could it be that the humble 1541 disk drive, much haunted by a miserably slow Disk Operating System, has finally come of age? After a thorough month or so of testing (extended use during the wee early hours of the morning) and extensive comparison tests (does coffee, tea or Milo have the worst effect when spilt on the device?) I have the answer - and it is an affirmative yes.



Dolphin DOS has taken the Commodore 64 and once sluggish disk drive out of the bracket of slow drive running into the world of real quick, very fast and amazingly agile.

Despite the availability of a dozen comparable wordprocessors, I still use *Easy Script.* Perhaps I'm just lazy, but that is what I use. As a result I have what you might call a stripped back version that is a mere 58 disk blocks long. This rids me of those annoying flashing colours on the original load, and various other seasonal wasting pastimes - such as checking the antiquated disk protection.

Using Dolphin DOS, this particular program loads in just on three seconds. This is barely enough time to gather my thoughts into a writing frame of mind, let alone begin to wonder what the disk drive is doing.

However, after several loads, one does begin to marvel as to what method of techno-trickery is used to attain these amazing load speeds. Is there a little man in there cranking the wheel of my 1541 a tad faster than usual? Perhaps a giant magnetic field inside my computer produces an effect similar to that in the movie *Philadelphia Experiment* - sucking everything off my disk straight into a giant vortex along the serial cable.

When you are so attuned to the 1541's slowness, Dolphin DOS is certainly a pleasant surprise. The speed up is produced by use of a parallel cable between the 64's user port and a piggy back board inside the 1541.

The effect can be likened to the difference between several thousand people trying to get into the Royal Easter Show through one turnstyle, and the increased flow produced by opening an additional seven gates. Dolphin DOS is your additional seven gates - giving a total of eight paths for information to pass between the disk drive and computer.

Normally information is sent one bit at a time. Every character you see on the screen needs eight bits to tell the computer exactly which character it is. These eight bits together are called a byte. Using a parallel cable we can send one whole byte at a time rather than just one bit. Theoretically this should result in a instant speed up by a factor of eight. However, Dolphin DOS also puts into use a variety of other methods used to increase disk access time.

These include reducing validation time, reducing delays originally designed for reliability and other more complex operations. The result - a speed up factor of 10 - 15 times on some operations, with others improving by a factor of about six!

Installation

The package is not to be connected up by the faint hearted. If you fret at the sight of bared circuit boards, flinch at the sound of an IC being pulled gently from its socket - then please do not read these next few paragraphs.

Start by opening the lids of your Commodore 64 and 1541 - you're going to be doing some major heart surgery on both - don your surgical mask and take a long flat blunt instrument in your right hand. Carefully lever out the Kernal ROM in your 64 - I used a butter knife, not recommended, but always readily available.

Next remove the 6502 and 6522 chips from your 1541 - connect the heart bypass machine and check the pulse and heart rate - only continue when they've stabilised (yours, not the computer's). Now carefully insert the various replacement boards/ROMS, additional cables, switches and the like. Now replace the 6502 and 6522 IC's into the respective sockets on the piggy back board.

Okay, so that was the abridged version of the operation. Comprehensive easy-to-follow instructions are included with the unit - and if you follow them carefully, you should have no trouble getting everything up and running. Some Commodore 64s do not have a socketed

board, which means that the IC's are soldered directly to the PC board.

If that is the case, you will need to purchase a socket (less than $2.00) and have the old ROM desoldered and the socket mounted in its place. This job normally takes about 15 minutes at the most.

Connection on the 128 is a little more complex due to the additional shielding and casing that tends to make the device rather awkward to fit without some form of nibbling tool. I have not seen a 128 version as yet, but they do exist, so ask at your local store as to availability.

Operation

Dolphin DOS doesn't just speed matters up and leave it at that. You now have additional commands via the function keys and keyboard that will make disk access commands such as OPEN 15,8,15 a thing of the past. Apart from the increase in LOADing and SAVing, disk formatting now takes under 20 seconds, with the option to format up to track 40 if required.

Shift-RUN STOP will load and run the first program in the disk, and you no longer need to include a device number at the end of a LOAD or SAVE command - thus LOAD "program" will suffice rather than the clumsy LOAD "program",8.

Verification is also faster - to prove it, leave the lid off your disk drive and watch the speed at which pressure pad moves in and out of the disk. There is an option to allow device changes, so the unit will operate with two drives.

For machine language freaks, like myself, there's also a simple but useful monitor. Program LOADs also identify the LOAD start and end address in HEX during loading. Additional screen editing commands have also been included - with clear to end of line, start of line and similar such commands. The CTRL key pauses a listing rather than just slowing it down and so the list goes on.

Conclusions

Dolphin DOS is an excellent product reflecting the state of the art when it comes to improving your 1541 drive. Many aspects have been considered, and the unit does not take over your system to the extent that it becomes clumsy and difficult to remove. Two switches totally disable Dolphin DOS, allowing fussy programs to LOAD and RUN correctly.

Good documentation and consistent operation over the past months have led to my confidently recommending it to many people. You may have some small problems with heating in badly ventilated areas - so keep in mind that a fan may be required to provide the necessary heat dissipation.

Dolphin DOS is distributed by Micro-Accesories and sells for a recommended retail price of $169.00.

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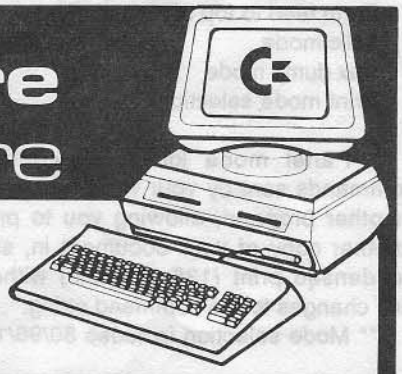
commodore computer centre



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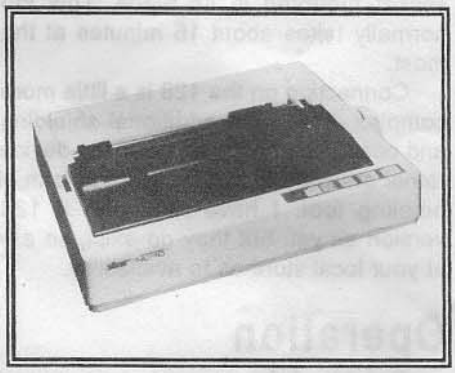
The Star NX-10 Printer

Looking for a new printer? ***Eric Holroyd*** *checks out this third party one.*



I've had my Star Gemini 10x for over two years and have been more than satisfied with it so I was pleased to have the opportunity to review a later model Star printer known as the Star NX-10.

This has many features not found on earlier printers such as easy front panel control of many of the things you'll want to do when printing a document.

Features selectable from this "touch-panel" include:

- Left and right margin settings
- Forward/backwards micro-feed
- Two types of self-test
- Panel mode *
- Form feed to top of next sheet
- Italic mode
- Hex dump mode
- Print mode selection **

* Panel mode locks out control-commands sent by your word processor or other program, allowing you to print another copy of your document in, say, condensed print (136 columns) without any changes to the command string.

** Mode selection includes 80/96/136 (this means characters per line on normal paper), or in other words normal size/elite size/condensed size characters, OR you can select NLQ which give normal sized print in Near Letter Quality printing.

The NX-10 is very easy to get up and running as the instruction book is reasonably easy to read, plus there's a very handy plasticised "help" card to keep on the desk, and a sticker of Control Panel commands which you can stick in a convenient spot for reference.

This printer uses a cartridge ribbon which just drops into place and by simply moving the print-head sideways (with the printer off-line) the ribbon is automatically fed into place and you don't get your hands dirty! Replacement ribbon cartridges are readily available at around $16 or you can get a refill, called a Zip-pack, for around $7 or $8 which you can fit into the cartridge yourself. It's all explained in the instruction book, which I found to be easier to understand than some other instruction books I've had (or maybe it's me that's finally learning something!).

Being a non-Commodore (or third-party) printer, the Star NX-10 needs to be connected to the Commodore 64 with a suitable interface so that they can "speak the same language". Having used the Xetec Super Graphics Senior interface on the Gemini 10x I opted for the same thing on the Star NX-10 and it worked like a charm. The Xetec interface has many features which the NX-10 takes full advantage of, like downloadable fonts, a further NLQ font and an 8K printer buffer for example.

The Star NX-10 comes fully equipped with a tractor-feed for continuous paper, or you can easily feed single sheets in manually for special jobs. It sells for around $540 from most printer and computer outlets.

DOUBLE HEIGHT PRINT

lower case double high

QUAD HEIGHT PRINT

lower case quad

My review model was further equipped with an automatic sheet feeder, which is great as you just stack an inch or so of paper sheets in the feeder (much like feeding the office photo-copier) and from there on the feeder does it all. Press the print button and a sheet is fed in, printed and ejected into a holder on top of the printer. At around $165 it's a very useful printer accessory and I loved it.

The Star NX-10 supports all normal word processing functions like: horizontal and vertical tabbing, underlining, superscripts and subscripts, text-centering and aligning etc etc and has some great extra features as well. On the Star NX-10 you can actually back-space and over-print one character on top of another: also if you wish to print the figure 0 (zero) without the slash mark through it you can: then you can produce block graphics (if you wish to design your own logo for example): in addition you can set up a "macro" definition which will do up to 16 things with one command.

There are also character-sets for 11 different countries built into the NX-10 and they're easily accessed by sending control codes: furthermore with very little effort you can print in Double-size print (that's both double height and width!) and in Quand-size print which is double-sized Double. Great for eye-catching headings etc.

This Star printer also allows you to use **proportional** printing which makes your document look even better. Normally a printer allows the same space for a letter 'm' or 'w' as it does for an 'i' or an 'l' when really these last two letters need less space vertically, or in other words some letters need "proportionally" less space than others. A simple control code puts the NX-10 into proportional mode either from your own programs or from within your favourite word processor and it's all taken care of automatically.

The NX-10 was compatible with all the graphics printing programs I tried on it including: *Print Shop, Printmaster, Doodle, Koala Painter, Certificate Maker* etc and did a good job on all of them. It ran all of my *Easy Script* files which had embedded commands for the Gemini 10x and I thought it was a nice printer to work with.

If you're looking for a good all-round printer for word-processing and graphics printing then this could be just what you need.

The Star NX-10 Printer is distributed by Star Micronics, Unit 7/25 George St, Homebush, NSW 2140. (02) 736 1144. Xetec Interface is from The Printer Specialists, 31 Elgin St, East Gordon, NSW 2072. (02) 498 3333.

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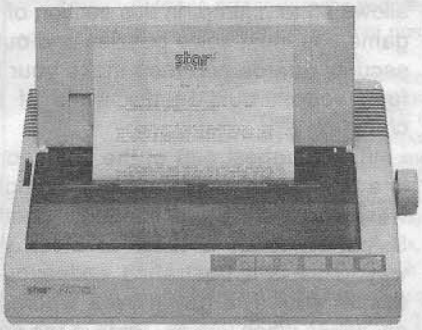

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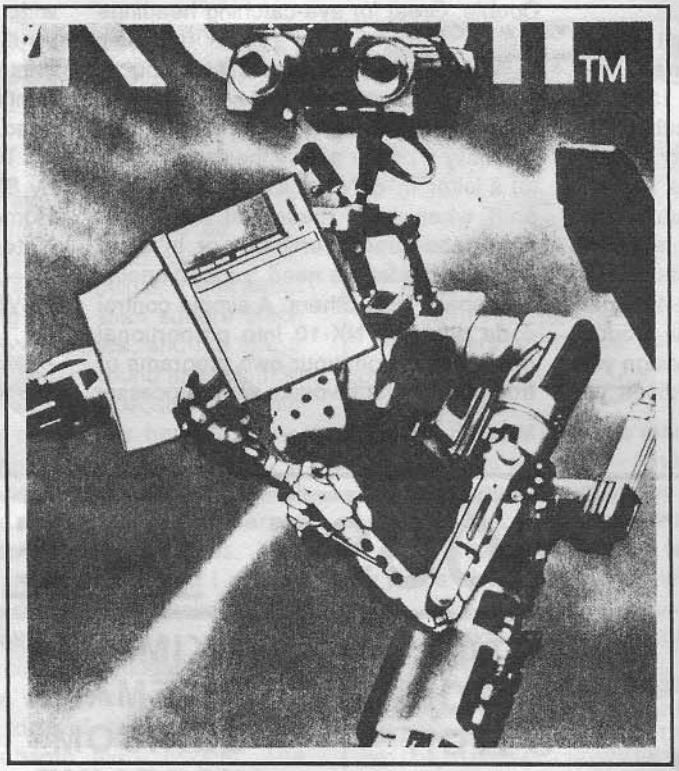
BEHIND THE SCREENS - GAME OF THE MONTH

Short Circuit

by J Mark Hunter.



This was one of the best movies that had come along in a while at it's release midway through `86, and it was a great pleasure reviewing it for *Home Computer GEM*. Then Kevin at Ozisoft was suddenly on the line and with contagious excitement let me know it had now been released as a game.

And it really is exciting, because it is so much like the movie, and for a change - a program that fits the cover.

Numero Fivo, a robot zapped by a heavenly bolt of terrific voltage and moving into robotic life. Moving, out of the Nova Robotics laboratories and into downtown disaster. You now get to steer the little metallic mayhem monster through his wayward perambulation and fight the forces of ignorant cohorts set on a one-way course of insane destruction, just because Number Five is Alive!

S.A.I.N.T. (Strategic Artificially Intelligent Nuclear Transport.) That's Number Five's desk job. And your job is to complete the frazzled adventure before some turkey within the screen does it for you.

At opening frame you find Number Five inside the Nova Robotic buildings. You must manoeuvre him around the lab and adjacent offices in a search for helpful artifacts, hardware and software needed to activate your laser and jump mechanisms and find the technical manual to help you build the decoy robot in the second part of the game. You start off with the ability to search and manipulate objects. You search an object by facing it, selecting SEARCH as your current program and pressing fire. You will then be informed of any objects found, and if you press fire again it will allow you to take the item.

Then there's a phase known as UTILIZE. Pressing fire you can use the item you have or moving into JUMP mode allows #5 to ...jump. In this section of the game you must solve puzzles and outwit security guards and then make your bid for freedom outside the walls of the complex.

The toughest part of the first section is a time when you're moving through a wash room area and suddenly another S.A.I.N.T. robot is there to block your way. This is a frustrating endeavour, I assure you. The guy moves when you do, jumps when you do, turns in the same direction. If anybody out there finds a fast, effective way to beat him, please let me know. For now, I suggest you try crossing him towards the front of the screen and head off the back wall at a diagonal, moving right. You'll eventually get it though, don't worry, but it's a phenomenal hurdle.

Once outside, your chase begins. Pursued by security forces ordered to kill and other Saint Robots programmed to deactivate you, the odds build up. They don't give up the hunt, and the only hope for survival is to build a decoy robot to be destroyed in your place. And here's an interesting point - there's such a thing as a "code of robotics." You can only stun your human pursers and causing death to living creatures will deplete your conscience energy. If your conscience level is totally used you automatically deactivate. Then, you find your van before the Nova chopper arrives and you survive.

It's a fantastic achievement as far as a computer game story line goes. There's so much to do, and so much fun action. The Number Five screen character is identical to the movie representation and moves exactly the same way. The *Short Circuit* game music is an eerie blend of frantic organ play and *Close Encounters* tempos and harmonizes perfectly with the excellent movability of the robot along a very fine graphic scroll-scape.

Definitely a pleasurable investment, and one that you won't get sick of for a long, long time.

Graphics :	**91**
Sound :	**76**
Music :	**88**
Presentation :	**94**
Documentation :	**90**
Overall :	**94**

Game : Short Circuit
Distributor : OziSoft
Publisher : Ocean
Price : $39.95

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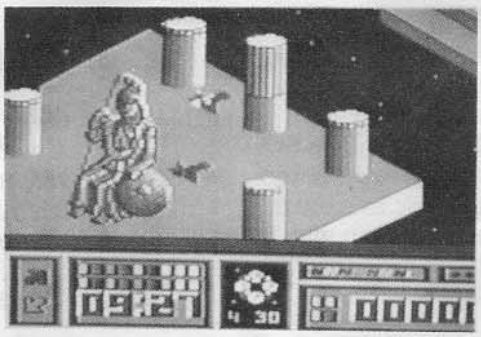
Behind The Screens

Leviathan



On the package they stress: "A space game inspired by the ZZ Top video *Rough Boy*." Give me a game inspired by *Legs* and I'll be happier. But until they do, *Leviathan* will do just fine.

The graphics and sound are superb, though the objective, even with its influence by rock and roll, is totally ordinary. A mission to seek and destroy enemy alien ships. You have zones, and each zone must be crossed, *Leviathan* destroying all the enemy ships in each zone within the allotted time.

If successful you move on to the next skill level and cross on to the next zone.

You get limited fuel, unlimited missiles, five lives plus a bonus life every 5000 points and extra fuel every

Repton 3

Meet Repton, a cross between Rockford of *Boulderdash*, and the Gillman. And the game, a cross between *Boulderdash* and a walk in the park. Central Park, NYC.

And what'd they say `bout *Reptons One* and *Two*?

Package promotion: "Our original game was immediately acclaimed as a refreshing new concept: a game requiring dexterity to complete its arcade style elements, and clear, logical thinking to solve its strategic puzzles."

Repton 2, even better, and now - numero three, and though I'd never been introduced to any of the *Repton* series before, I believe the quotes are true, because this time around I'm positively hooked.

Repton 3 has a total of 24 game screens. In order to complete the game you have to carefully determine your routes through each screen in turn, with the aim of defusing the time-bomb by passing over it. Ah, but three steps first...collect all diamonds (including those concealed in safes or cages);

collect the golden crown; and kill monsters. Your normal working day.

Each screen has a time limit and, if you do not complete the screen within its time limit, the time-bomb will explode and you will lose a life. Repton can, however, travel backwards in time because whenever a time capsule is collected the time-bomb's clock is reset. A thoughtful gesture.

Each screen comprises a series of puzzles. Many of these are interlinked and you may have to solve a number of small puzzles to enable you to tackle a large one. The puzzles may, in some cases, seem impossible - but they are completable eventually. It's all in the

Scooby Doo

The sheer weight of the Scooby-Doo cartoon series, its longevity and popularity, was enough to push me into play of the computer game. The misfitted adventures of "the gang", Velma, Shaggy, Daphne and Fred, and of course, the no-spine canine himself - Scooby Doo.

Loaded into adventure, the game sets itself inside the walls of a lonely castle used by a mad scientist for his base, conceiving ill-designed experiments amongst the beakers and benches. The gang's van, the Mystery Machine, has arrived at the ruined castle to enable the group to traverse the cobbled corridors and explore the shadowed reaches of this abandoned royal retreat.

Suddenly, they're snatched by the madman's heavy-weight thugs but good ol' Scoob manages to scamper away. Now, you, the player, join our hairy friend in the search for his comrades throughout this dungeon of impending doom.

A typical scroll-walking adventure game along a seemingly endless hallway of doors and staircases, *Scooby-Doo in the Castle Mystery* ranks itself into the higher brackets of value entertainment

new city, and every new rock tune.

The landscapes are nicely perceived, with a simulated shadow below your cruiser as you fly, and dangerous O rings smoking out of strange-fangled smoke stacks to cause your easy obliteration.

The scrolling landscapes fly, for a refreshing change - diagonally, and sometimes you even disappear behind things as you fly, that's how real it is!

The handling, though, is not the best, pretty awkward, actually, and even though it flips and turns well, you easily lose control and it wallows their in mid-space like a St. Bernard trying to get comfortable in a Mini. But remember that the music is hot and this makes the difference in recommending it as a good, good game.

Graphics :	89
Presentation :	87
Documentation :	78
Music :	92
Sound :	88
Overall :	86

Game : Leviathan
Distributor : Melbourne Hse
Publisher : English Software
Price : $N/A yet

---

amount of time you're willing to ascribe to the challenge.

As in *Boulderdash*, you've got rocks as a major contention happening within the bowels of the dirt south of your shoe soles. They fall if unsupported and if they fall on your head they don't stop till you're wearing your Reeboks on your chin. Yes, crudely, we're talking Squish City. We're talking death. And then the rest of this underground commuter rush that must be avoided, the skulls, monsters, fungus and other such fatal bruises. And when an egg falls there sure ain't nothin' to yoke about. When it cracks a monster hatches out. The only way to eliminate these gooks is to drop a rock on their heads.

Repton 3...yes, this is the start of the wrap-up...is quite an excellent game and definitely one that got me heading back to it after the others had hit the Yawn County graveyard. It's set out with a seemingly endless scrollscape and keeps you occupied with a surplus of challenges.

The music is monotonous though, like the organ player dropped dead on the keyboard and they forgot they still had the record button depressed.

Aside from that, *Repton 3* as a sequel has certainly excelled its program lineage and is worth a tap into your fun supplies some lazy afternoon.

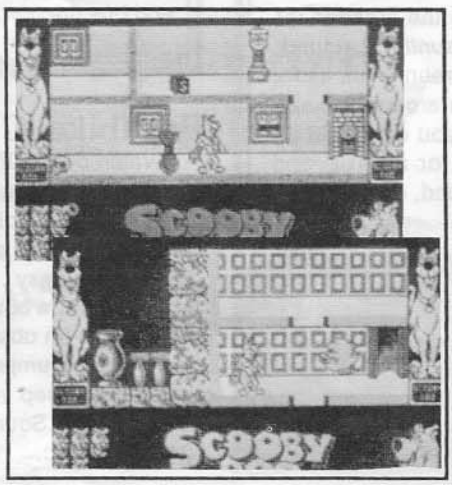
Graphics:	88
Presentation:	90
Documentation:	87
Sound/Music:	72
Overall:	85

Game: Repton 3
Distributor: ISD
Publisher: Superior Software
Price: Disk $39.95
Cassette $34.95

---

because of its fine graphics and music. The simulated Scooby Doo theme song has been well adapted to the computer and provides a light-hearted backdrop to the compelling play at hand.

Though, the operative word is `typical'. Scooby being manipulated through the doorways and up the staircases by the joystick, and biffing the opposing attackers along the way with a press of the fire button and a slap of his paw. Yet, we've certainly become comfortable through the years with these goofy cartoon characters, and watching them on the screen is a lot nicer than a strange intruder.



Graphics:	65
Presentation:	70
Documentation:	51
Sound:	64
Music:	90
Overall:	78

Game: Scooby Doo
Distributors : ECP
Publisher : Elite
Price : Disk $34.95
Cassette $24.95

Arcade Action

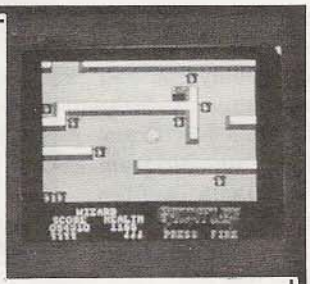
by John Hatchman

Well, after a short holiday up the coast I am back to write my column once more. Man, it's been really top weather up there too. Oh well, better unscramble my mind to tell all you avid readers about some fabuloso new games set for release soon and some that have already arrived.

Some of the new releases I will be chatting about include *Gauntlet, Paperboy, Aliens, Space Harrier, Scooby Doo* and *Galvan!*

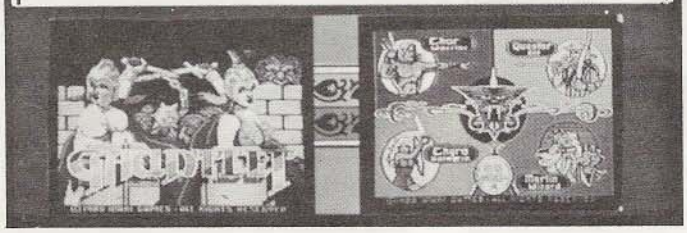
Last month I wrote about *Yie Ar Kung Fu II* and I seem to have my facts mixed up. The truth is that two *Yie II*'s have been released, one going by the name of *Shao Lin's Road*, and the other, *Yie Ar Kung-Fu II.* Well, I have had a whiff of *Yie Ar II* and it riddles its predecessor *Yie Ar Kung-Fu.* Not bad, hah!

Gauntlet



Well, right off the top of my head (sound familiar), *Gauntlet* is available now in the shops with its 128 level disk version and its 80 level tape version. But there is a problem with the tape version - it tries to load level 81 off the tape - but it doesn't seem to be on the tape, what a pity eh!

Anyway, *Gauntlet* has been out in the arcades for some time now, and there is talk of *Gauntlet II* around. For you deprived kiddies who haven't seen it yet, it is a one or two player, multi dungeon, run around a maze and shoot-em-up style of a game. If you didn't get all that, it is a game where you search for an exit and battle off the evil scum that floats around, dying to zap your health to zero.



Aliens

Oh my god, they're in the room. But where are they? 10, 8, 6 metres. Run, they're in the roof, watch out, duck, quick run. Now does this sound familiar to anyone? Yes, that's right, it's the new game called *Aliens* released by Activision. Yes, this movie - cum - game has so many levels of blasting and running to keep any gamester jumping with fright and fear.

The not so finished product I saw had a neat opening screen with heart throbbing music and the movie - cum - computergame credits flashing up in turn with the music. Once you progress past the first intro, you are given the status of all your men, and a choice to enter an entrance code to play any part of the game.

But the trick is, you have to complete each part to find out the hidden mission codes. The first part reqires you to steer the dropship to safety on the colony, and it is no easy task. After twenty or so futile attempts I finally made it to the ground, and to make the job easier for all you gamesters out there, the first code is 2727H. Go to it.

The second part of the mission requires you to locate the exits and get your four men from below out of the nuclear reactor. You have on screen, all the players' heart status, an early warning monitor and a motion detector. Try and get just one of your men out! The next level requires you to shoot off the attacking aliens while down the bottom of the screen your other men are melting through the door.

Not such an easy task. Now for the last pattern I reached. You must run around the underground network to find the right tunnel to the dropship. Try it yourself now and buy the game.

Pushbike Classic

Watch out for this classic conversion from Elite. The aim of the game is to ride your pushbike along the street and avoid all sorts of moving obstacles and throw the papers in the mail boxes and break a few grave stones and windows, and if all that sounds easy . . . then wait till you get to the end of each level, you get a bondy special.

There is an obstacle course in which you have to ride along and jump the jumps and throw your papers at the targets. Well, that should keep you busy for quite a while finishing the days of the week. Sounds great, it is great, so look out for this arcade classic.

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And while the others were enjoying the convenience of auto dial and auto answer, you were left waiting again.

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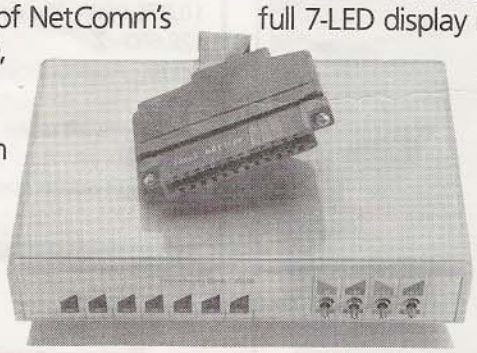
The Modem 64/128 is a full-feature, two-speed auto modem compatible with all existing commercial and public domain software, including Commodore 1650 software.



It operates at 300/300, 1200/75 and 75/1200 baud.

It comes complete with Videotex and Terminal software and even a VIATEL subscription form.

It provides auto dial, auto answer and auto disconnect features you'd only expect to find on much more expensive modems.

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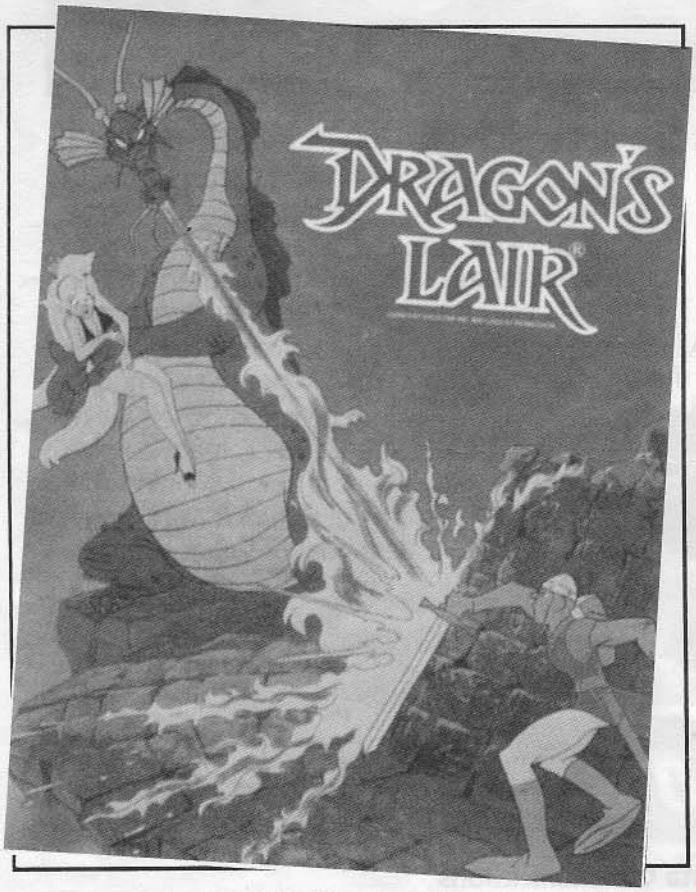
Space Harrier

Space Harrier is a well known arcade game. It has hydraulic movement and the screen to blast away with. Now it's your turn to try it, the computer game is a great conversion. Pity no movement, but what do you expect, a bonus hydraulic chair or something? Another conversion is the long awaited *Scooby Doo.* It has the music of a one fingered pianist, the graphics of *Black Whyche* and the plot of a spaghetti western. Yes, it does sound like I'm going to give it a bad rating, but alas I'm not. Why, I hear you ask? Because when I saw Shaggy squashed in a bottle or something like that, I got so addicted to the ghost-busting I was hooked on saving my best buddy Shaggy. But play before you buy, just to satisfy your own tastes.

Galvan was a classic that has taken its time to reach Ozi Land, and what a shocker of a game it turned out to be. It doesn't have a very wide variety of patterns (all similar). But just because I didn't like it, you may just like the game play, so have a geeza anyhow.

If you bought *Dragons Lair* and loved it, here comes *Dragons Lair II,* the escape from Singe's Castle. Yes, it has another eight action packed screens to whet your appetite. It has that fine load it while you play it loader, which seems to be quite a success over here and in England.

Also there is a whiff in the wind of *Bombjack II,* the follow-up to the hugely successful *Bombjack.* Yes, more action packed screens ready for your pleasure of play.



High Scores Table

Score and game	Name
25.4 million - PSI-5 Trading	LEIGH MCMAHON
21,000 - Cauldron II	LEIGH MCMAHON
7694 - Law of the West	LEIGH MCMAHON
66,850 - 1942	RUNSOFT
33,940 - Ping Pong	RUNSOFT
6,092 - Dan Dare	RUNSOFT
20 UN PAR - Leader B. (novice)	RUNSOFT
13 UN PAR - Leader B. (amateur)	RUNSOFT
7 UN PAR - Leader B. (pro)	RUNSOFT
1,359,730 - Mercenary	RUNSOFT
259,730 - Trailblazer	RUNSOFT
117,130 - Uridium	RUNSOFT
8,200 - Wizardry	RUNSOFT
753,820 - Track and Field	RUNSOFT
358,325 - Warhawk	RUNSOFT
124,317 - Kung Fu Master	RUNSOFT
1,686,600 - Commando	RUNSOFT
1,238,023 - Bounder	RUNSOFT
63,640 - Eidolon	RUNSOFT
36,700 - Ghosts n Goblins	RUNSOFT
117,500 - Green Beret	RUNSOFT
113,800 - Int Karate	RUNSOFT
64,590 - Knight Games	RUNSOFT
135,292 - Rescue Fract	RUNSOFT
637,031 - Second City	RUNSOFT
66,400 - Split Person	RUNSOFT
1,261,615 - Spy Hunter	RUNSOFT
62,761 - Star Quake	RUNSOFT
306,060 - Super Cycle	RUNSOFT
95,000 - Thrust	RUNSOFT
63,997 - Dragons Lair	RUNSOFT
253,000 - Fist II	RUNSOFT
126,190 - Schooldaze	RUNSOFT
10,875,090 - Yie Ar Kung Fu	RUNSOFT
128,600 - Z	RUNSOFT
6,830 - Aces of Aces	RUNSOFT *

** Runsoft is an arcade users group which compiles high scores. Add your name to the list by sending in your high score soon.*

That about wraps up for this month of Arcade Action. I will be looking forward to your company once more in the near future. Oh, g'day to DOG who showed me some of the preview software.

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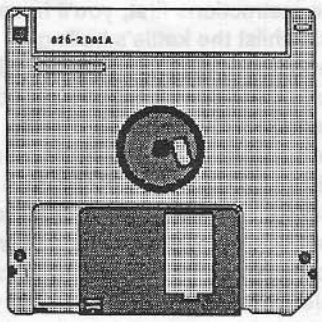

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The SlimLine Replacement Case for Commodore 64

by Eric Holroyd

Shortly after Commodore released the C-128 in Britain the renowned English programmer, Tony Crowther (*Blagger, Potty Pigeon, Gryphon, Kettle* etc,) was quoted in one of the English Commodore-related magazines as saying that he loved the keyboard of the new C-128 so much that he was using it most of the time in 64 mode as it was "so much more comfortable to use".

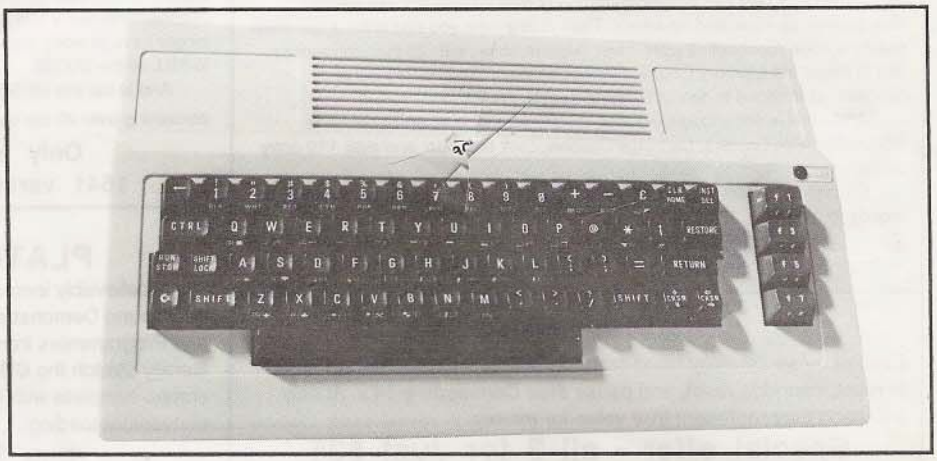
I know exactly what he meant, as I have both an early model 64 and a 128-D and there is a big difference in typing on the two keyboards. Quite honestly I've preferred to use the 128 in 64 mode for my *Easy Script* work but as of today I'm back on the good ol' 64 because I've upgraded it with one of the super new Slimline replacement cases from Micro Accessories in South Australia.

It's a very simple job to fit the innards from the old 64 into the new case as the kit comes complete with a set of very easy-to-follow instructions, and if you do what most computerists don't do and read the instructions first, you'll have the job done whilst the kettle's boiling.

The only tool you need is a Phillips screwdriver and there's just over a dozen or so screws to be removed all told. You take the case apart, take out the printed circuit board, put it in the new case and then screw it all together again. There's a definite sequence of operations which are shown beautifully on the instruction pamphlet and it's all very easy. I managed it okay, so the rest of you should be able to do it!

There are "blanks" moulded into the rear of the new case which you simply punch out to take your reset switch etc, or if you have Dolphin Dos fitted (it's made by the same company) there's a space for its switch to be fitted straight into also.

The Slimline case is bigger in the "front-to-back" direction, but not as high



as the old 64, and it looks very much like the new C-64C or the C-128 keyboard. It has ventilating slots in the section behind the centre group of keys, and either side of the vents is a moulded recess measuring 9mm by 5mm which is exactly the right depth to drop in a little home made "cheat-sheet" with the instructions from your latest game or utility. A piece of cardboard cut to the right size will stay in one of those recesses beautifully. I believe that one of them may have been designed to accommodate the upcoming numeric key-pad which Micro Accessories promise for the near future, and which would enhance your 64 even further.

The keyboard on my refurbished 64 now slopes down at a much better angle, and being very low now it lends itself better to touch typing without that "tiring of the wrists" which I used to feel on the old style 64 before switching to 128/64 mode as I explained above.

The result is that as well as having a nice new look to the 64, I've already found it to be much better to work on. A quick phone check of a few friends who've bought the new case established the fact that they're all feeling as happy and pleased as I am about it.

One thing though: I live in one of those outer Sydney suburbs where the temperatures are always much hotter in summer (and colder in winter!) than the city and surrounding areas so I'm very conscious of anything that could suffer from the heat as much as I do myself. With this in mind I drilled a couple of extra ventilation holes in the bottom of the case before putting it all together. Just a precaution on my part and it's up to you whether you follow suit on that score.

The main thing is though that you'd be doing yourself a favour by getting the new case and you can feel good at the same time about buying Australian made goods as this item is entirely Oz designed and manufactured. It's being exported to UK as you'll see in the ads in the English magazines. Yet another instance of Australian know-how leading the rest of the world!

All in all this is a fine product and one which I can heartily recommend to all 64 owners as a present to themselves for having the good sense to buy the 64 in the first place.

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Disk Magazine

It would be fair to say that we have come a long way toward producing a professional magazine on a disk, especially with the launch of the new Windows System. ***Andrew Farrell*** *explains.*

What started out as a fleeting idea, has made its way to Issue Six. Not without glitches along the way, but we made it nevertheless. At last a major improvement has been made, one that I feel you would be interested to know about.

Windows System

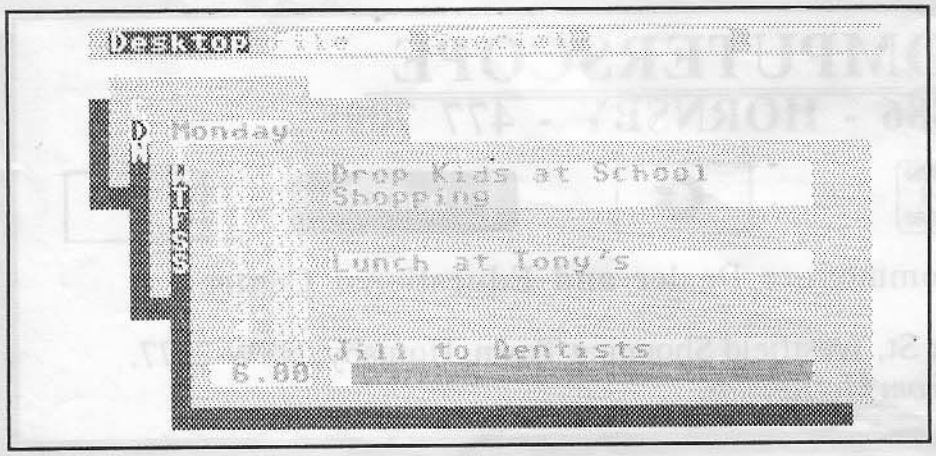
We have added on the front end of both the Number Five and Six issues a window driven menu system. This allows selection of magazine articles, and the various programs, simply and quickly. If you have used an Amiga or Apple Macintosh, or even GEOS, you will already be familar with the type of operating system.

At the moment the windows software is by no means comparable with any existing packages, but the principles are the same. And more importantly, the potential is there. We are committed to continual development of the disk magazine, and already a prototype exists which is up to ten times faster than the first version, and has all the desktop functions fully implemented.

In the future wordprocessors, databases and similar packages will be written that also work with the windows package - existing software may also be modified for compatibility. Unlike GEOS, Windows is text based, so it is not as flexible when it comes to working with graphics. However, for efficient, simple and speedy processing, Windows will be streaks ahead.

At this stage an open architecture has been used. There is no disk protection, and no fast loaders.

From the number seven issue you will be given an option to select a fast loader, or perform a normal load. In this way, external disk operating systems such as Dolphin DOS will have maximum effectiveness.



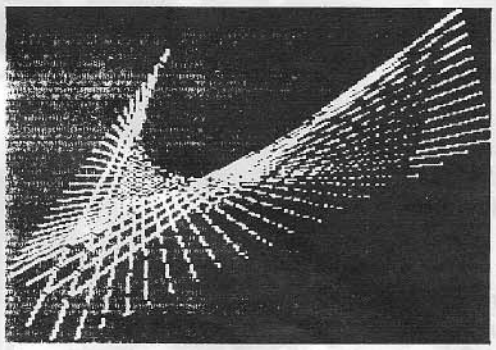
Operation

To use the Windows desktop, use the cursor keys and return key to move about and select options. In future we will be adding joystick control as well, however for now, the keyboard will more than suffice.

In future development of Windows, we would like to include your ideas of what the ideal desktop environment should include. At the moment there is a simple week by week diary, clock and notepad. Version 2.2 of the desktop will automatically maintain these on your current boot disk, and also allow you to swap from disk to disk. At the moment each desktop only works on that particular disk magazine. I trust you will find these improvements a further reason to continue purchasing the disk magazine.

This Month

On this month's issue there are some very smart utilities for disk users who are looking for a better way to file information about their library. One of the biggest problems with a large disk collection is finding one particular program amongst several hundred disks.



Disk Filer solves that dilemma by reading your disk directories, filing them, sorting them, and printing out catalogs for each or all of your disks, and Home Inventory, originally planned for our number five issue, is included. A simple program for keeping track of your home contents.

The usual swag of demo's are included - five in all. These are now arriving at such a rate that we can hardly keep up with them. Only the best are chosen for distribution on the disk mag. All of these are an excellent demonstration of the 64's abilities, as well as a neat way of checking out new games coming soon.

For graphics freaks there's a hot line, colour music program which looks a little like something out of the game *Stix*.

Well, that's just a small sample of what you will find. For a complete look, order your Disk Magazine Number Six issue today!

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Amiga Column

by Tim Strachan

Anyone who took a look at PC87 will be convinced that the PC market is alive and booming, and that there's a lot of very desirable hardware and software out there.

It also seems that Commodore and Apple are making the running with their 68000-based machines, specifically the Amiga and the Mac. The capabilities of the Macintosh II, with its open architecture (ie, third-party peripherals can be added on), and its 68020 chip (very fast), are quite awe-inspiring, especially when you consider the large body of software existing for the Mac, some of which will run on the Macintosh II.

... On the other hand, there is the Amiga, which will certainly take a 68020 chip and relish it, is already an open-architecture machine, contains its three custom-designed co-processors (to handle graphics and other tasks while the main CPU carries on), and has a comparatively good price-tag. It's becoming a case of "Desktop Publishing" versus "Desktop Video".

Commodore has really begun to do it right with their Amiga push, in this very competitive market. You'll read else-where how Commodore went through a very lean period up to about a year ago. Dark mutterings were circulating about imminent collapse, no software available for the Amiga, poor targeting of the market, etc. The talk now is about how well they'll perform, and to date it's been good news and is set to be better.

Desktop Video

Firstly, the Amiga is finally being recognised for the revolutionary machine that it is: superior graphics and audio capabilities at last make it possible to talk of real "Desktop Video". That is, the tools are now available, at a comparatively low price, to create animations, graphics, sound, slideshows, and to mix and match and experiment, and get the results onto videotape if you like. No longer is the dedicated, megabuck studio required - the only real obstacle is your imagination, and the time and energy to get it done.

At present many people are playing, experimenting and wondering at the possibilities that have been opened up. TV ads and animations are being created here and overseas, experimental films are being made, and software writers are stretching themselves to write applications that take full advantage of the Amiga's capabilities.

The most significant point is that previously expensive video tools are being placed in the hands of people who would never have dreamed of having them - so there are now a number of elite artforms available to many more people. The results are appearing already. As more people get acquainted with the possibilities, we'll be seeing some stunning stuff.

Tim Strachan - Biopic

Born and raised in New Guinea. Extensive work and travel overseas, especially in Europe and South America. Trained in mathematics and acupuncture. Interested in computers in general as all-purpose tools for communication and creativity, in particular the Amiga for "Desktop Video". Looking for ways to make computers more accessible to the average user, hence MEGADISC as a start.

End-user's machine

Another advantage of such a machine is that, while hackers love it, it is an end-user's machine. So many good applications are (and will be) available that the user can get on with the real use of tools that many clever people have spent the best years of their lives perfecting. This is very good news for the 49% of Amiga buyers who've never owned a computer before, and just want to use it to produce, whether it's a video, flash documents, business applications or whatever. And if you've learned to handle one application, you've gone a long way to knowing how to handle the next one, because of the uniform "interface" - ie, the WIMP (Windows, Icons, Mouse, Pull-down menus) environment.

One final, and often overlooked point in favour of the Amiga is its ability to "multi-task". This essentially means that you can be running a number of programs simultaneously, and switch at will from one to another. So you can be printing a picture while you're typing out a document, and can switch also to your outline in your "Idea Processor" whenever you want.

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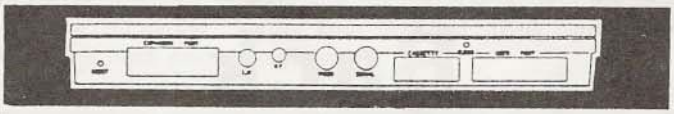

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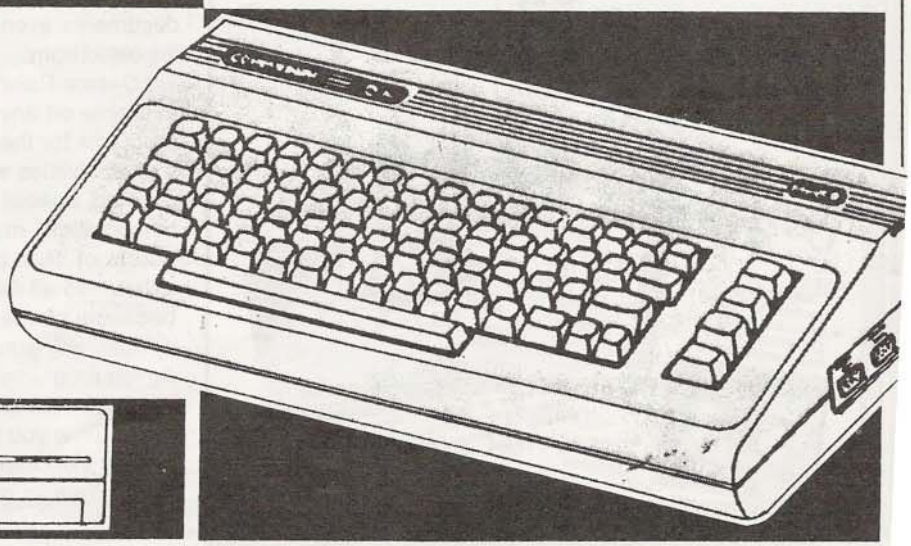

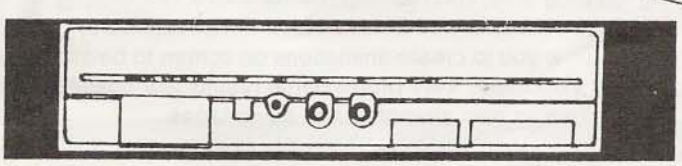

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The only limitations are whether the programs have been designed to take advantage of it (and the good ones have), and the amount of memory you've got installed. And the rule is, the more the better. You can't run a dragster or a Rolls on a two-gallon tank.

Getting info

So what's happening locally, and where can the end-user get information? There's plenty available now, and there's plenty more coming, and I'll mention a few sources below:

* You can join the recently established Amiga Club, organised by Craig Tegel at 67 Mars Road, Lane Cove, Sydney. Membership will provide you with discounts on hardware and software, free demo programs, a free software package, a quarterly newsletter, and general user support. It looks like a good proposition.

* You can buy the all-Australian magazine-on-a-disc called MEGADISC, either by subscription or at your local dealer. It's full of information, reviews, articles, graphics, animation, utilities, demo programs and more. You can contact the publishers at PO Box 759, Crows Nest, Sydney, 2065. A product well worth supporting.

* Ask your dealer or the people at MEGADISC about getting copies of the Amiga Library Disks, also called the Fish Disks after Fred Fish (yes, that is his name) who has been responsible for collecting and organising them. And a good job he's done. As of this writing there are 57 available, full of public domain games, utilities, developers' programs, graphics, animations, you name it. All those enthusiastic developers over the last 18 months have been generous enough to let us have the rewards of their labours for the price of a blank disk. For the keen Amiga user, they're a must, even if only for browsing and being amazed.

* Join or start up an Amiga Users Group or BBS. Already well established are:

1. Australian Amiga Users Association,
   Attn: Ray Wilson, Tel: (047) 514 143.
   This group also runs a BBS on an Amiga for Amgsa users:
   Tel: (047) 588 006.
2. Victorian Amiga Users Group,
   Attn: Neil Murray
   PO Box 109, Nth Balwyn, Vic 3104.
3. Contact BBS in Sydney has an Amiga section run by SYSOP Stephen Williams. Tel: (02) 550 1004.

A full listing of Australian Amiga User Groups and BBSs will appear in the next issue of MEGADISC.

* Finally, visit your local dealer and buy some of the excellent software available for the Amiga. In spite of early pessimism, such software is obtainable in quantity and quality. A quick list of recommendations:

Scribble II - an excellent Word Processor whose documents can be imported into other programs, such as:

PageSetter - one of the first Desktop Publishing programs for the Amiga, it is reliable, fast, and has many excellent features, including a Text Editor (essentially a Word Processor), a Graphics Editor (a paint program for on-the-spot design), and a lot of flexibility in formatting your documents. It's easy to use and capable of professional-looking documents even on a dot-matrix printer. Graphics can also be imported from:

Deluxe Paint II - definitely the best graphics/paint program available on any personal computer, and voted the best of all programs for the Amiga last year, this is the updated version 2. It's capabilities appear to be endless, and include perspective drawing, special effects, stencilling, use of any brush size and composition, multiple sizing, magnification, and so on. The depth of this program is such that no-one I know has exhausted all its possibilities so far, after months of use. And because of the standardised file formatting on the Amiga system, any graphics from *Deluxe Paint II* can be used in other Amiga programs, such as *PageSetter* above, or:

Aegis Animator and *Deluxe Video Construction Set* - both of these allow you to create animations on screen to be stored on disk or videotape. Very professional results are possible, and each offers its own strengths and advantages.

Back Issues

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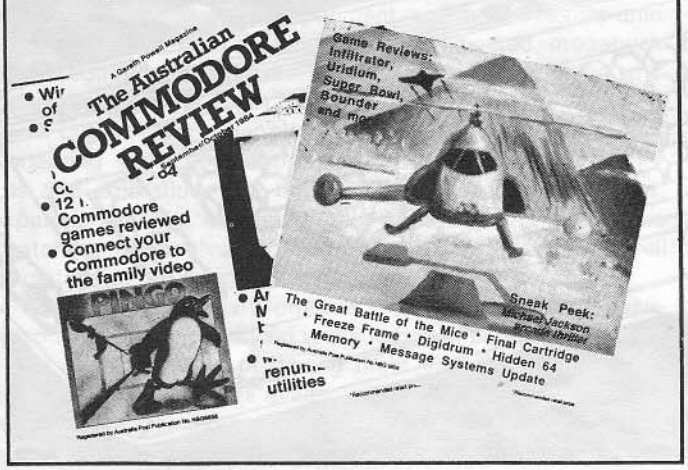

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Australian Commodore Review Disk Magazines Number 1-5

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chargraphics
line transfer
new reset
colour window
flash
input
border
paint demo
paint demo 2
paint
forest raider
(c)1984ht
prime artifaxh

Number Two

runme
fast dos
open
hi-display
ddtitle
ddscreen1
main
contents
programs
help
editoria
3d.bas
3d.sim
3d.ult
teleport
byts and bites
char.boot
character editor
blk.mc
rblk.mc
bsave.mc
ched.mac
gothic.set
wacky.set
computer.set
help.pcg editor
help.pcg.boot
ecf.demo
prog.0
prog.00
prog.1
prog.2
prog.3
acr.ecfdemo
instructions
bytsprites
news

Number Three

runme.sys
fastd.sys
open .sys
hi-di.sys
ddtit.sys
main .sys
ddscr.sys
editorial
udpg
baspred
news
calender
point sq
hangman
typing practice
contents
help
programs
start
hello
bsave.hi

mcode
bcbset.iii
ahouse.pic
names
bcastle.set
brix-editor
change set
inuse
rblk.mc
bsave.mc
blk.mc
menu
ahi.pic
afrontstep.pic
labyrinth
finance package
nsw bbs list
easy load&run
roadblock-64.doc
roadblock-64
bird invaders
bird source.pas
bird source.txt

Number Four

runme.sys
fastd.sys
open .sys
hi-di.sys
ddtit.sys
main .sys
ddscr.sys
editorial.sys
news .sys
contents .sys
programs .sys
start
byte-put 2.0
cont.loop
screen.8
menu/help
tboot
character editor
old
blk.mc
rblk.mc
bsave.mc
sprite editor
sprites.mc
colour
bsave.$c100
split.demo/help
split screen.mc
help.pcg editor
help graphics
graph.mc
computer.set
wacky.set
gothic.set
raise basic.boot
byts and bites
bytsprites
move.start
animate.help
animation editor
animate.mc
move.mc
move.bas
car.sprites
typing tutor
easy load&run
directrix
ss-directrix
simulation.c2

Number Five

runme.sys
fastd.sys
open .sys
hi-di.sys
ddtit.sys
main .sys
ddscr.sys
editorial.sys
news .sys
contents .sys
programs .sys
pams list
sprite database
max headroom ii
seven up
guinness
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the porsche
cent.inst
centronics
cent-nomessage
i (listing 9)
c (listing 3 (mo
golf (listing 7)
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TUTORIAL

Infocom Four-in-one Sampler Part Four

by J A Salt

ZORK! What can I possibly say that hasn't already been written about this internationally acclaimed fantasy adventure. Available on three separate disks and better known as *Zork I, II* and *III*, each part has been created as a unique game in its own right. Seasoned adventurists (masochists) can approach the *Zork Trilogy* as a three-part adventure if they so wish.

The Trilogy was originally the brainchild of four people: Dave Lebling, Mark Blank, Tim Anderson and Bruce Daniels. The extract we will be sharing from Infocom's *Four-in-one Sampler* disk this month is from *Zork I* which is classified as a Standard Level game. *Zork II* and *III* are Advanced Level games.

As the excerpt is the opening sequence of this game I can once again extend an invitation to any reader who has the full-length version to join us in this exercise.

Infocom's excerpts for their sampler disk were very carefully chosen to introduce each of the categories their games cover. They are *Planetfall* - a science fiction comedy, *Infidel* - a tale of adventure, *Zork I* - a classic fantasy story and *Witness* - a detective thriller adventure.

Sould you have any difficulty in obtaining this disk please contact Computer 1, 202 Alison Rd, Randwick NSW 2031. (02) 398 2315.

Confession Time:

I must first admit to you that of all the Infocom adventures I have played and enjoyed, the *Zork* games were the ones that I would glance at for an hour or so and then slip back into my disk file.

To say I felt intimated by *Zork* would be an understatement. Whenever I opened a computer magazine a cry for help would leap out at me from some poor adventurer trapped in The Great Underground Empire, or I'd turn a page only to read a desperate plea for help from some poor deranged person wandering hopelessly through a maze. The more I read the more intimidated I became at the thought of attempting *Zork*.

However, to give credit to this tutorial and to put into practice what I have been encouraging you the reader to do, I have played the excerpt from the sampler disk and can now share my efforts with you.

I must add however, that I personally would not advise a novice player to purchase *Zork* as their first adventure game. Its excellent reputation speaks for itself and it is understandable why so many newcomers would have heard of it. But I would suggest you gain some adventure experience before you tackle this series.

I must also warn you before we go any further that should you start this excerpt and if you have an addictive type personality you may not be able to stop, SO BE WARNED and REMEMBER - ZORK IS A TRILOGY!

Let's Play

"... You are a treasure hunter and have heard of a nearby underground labyrinth that contains vast amounts of treasure. Naturally, you wish to obtain as much as possible. To measure your success in this treasure hunt, a score is kept; you get points both for finding treasures and for placing them in the trophy case that you will find during the story. Obstacles will lie in your way, but you can overcome them by observing and clear thinking.

"You start the story in front of a large white house, with the entrance to the underground hidden nearby. In this sample of *Zork I*, your goal is to FIND YOUR WAY UNDERGROUND AND GET PAST A RATHER NASTY OBSTACLE TO REACH THE MAIN UNDERGROUND CHAMBERS ..."

Okay, my "simplistic" moves to achieve the above goal were as follows:

Example Zork I Excerpt

North - (north of house)
east - (behind house)
open window
west - (kitchen - 10 points)
west - (living room)
move rug
open trapdoor
take sword and lamp
turn on lamp
go down (cellar - 25 points)
north - (troll room)
kill troll with sword
again
(35 POINTS/13 MOVES)

Looks easy, doesn't it? I must be honest and tell you that I sweated blood working through this excerpt. Playing it was fun, but when I attempted to draw my first map I struck problems. Thinking back over my earlier experience with *Zork*, I realised that any intimidation I had felt before had come about through my lack of mapping experience.

Until now, we have dealt with adventures that have shown us how to travel in eight different directions (see Part 3). *Zork I* introduces us to add two additional directions to our list namely "UP" and "DOWN". (See Figure C)

It also introduces us to what could be referred to as "TUNNEL" directions. These are routes that do not comply with the standard commands we have been using so far.

For example: if you wanted to travel from Location A to Location B and it was to the East, you would type GO EAST

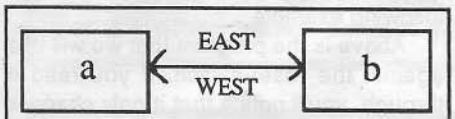

Figure A: a. Location a
b. Location b

wouldn't you? Then if you wanted to return to Location A from Location B you would expect to be able to GO WEST (See Figure A)

However, at the start of the *Zork I* excerpt you are standing facing the WEST side of the house. If you GO NORTH, you will find yourself standing facing the NORTH side of the house. The same thing applies if you GO SOUTH. If you travel EAST from the NORTH or SOUTH side of the house, you will arrive facing the EAST side of house. Try drawing these locations first and then continue to ENTER the house. (See Figure B).

Another type of TUNNEL direction can be examined in this excerpt when you arrive at the CANYON BOTTOM. To travel from CANYON BOTTOM to reach END OF RAINBOW you can type GO NORTH. However, if you type GO SOUTH to return to CANYON BOTTOM you will be told "you can't go that way". The correct direction needed is SOUTH/WEST. In other words your actual arrival point at the END OF RAINBOW was from a NORTH/EAST direction. (See Figure C)

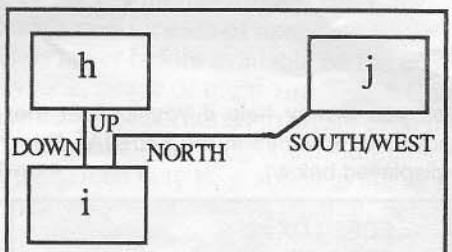

Figure C: h. rocky ledge
i. canyon bottom
j. end of rainbow

To help you understand a little better, try and picture MAPPING as follows:

When you draw a map, think of all the lines that connect the locations together as being tunnels, therefore, from the "WEST OF HOUSE" location if you enter a tunnel to the NORTH or SOUTH and although it may twist or turn, if you were really in a tunnel, you would be oblivious to any change in direction. If you examine Figure B you have actually travelled around the corner of the house to reach your next location.

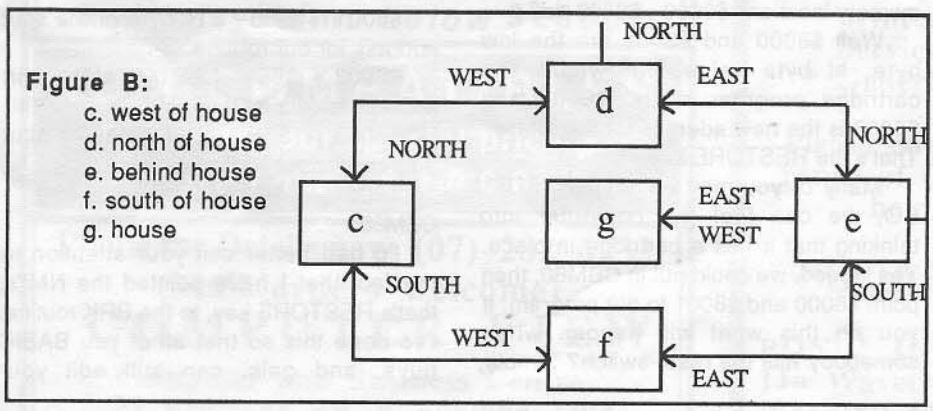

Figure B:
c. west of house
d. north of house
e. behind house
f. south of house
g. house

By thinking of mapping in this way, we can neatly side-step the problem of lines changing direction as they link locations. I would always try STANDARD directions first but if you strike any difficulties in getting to or from a location then check for TUNNEL directions.

Be prepared to redraw your maps many times before a sequence if finished. The challenge of creating a fairly accurate map is another reason why I enjoy playing adventure games.

MY CHALLENGE TO YOU:

If you have played the excerpt and realised that my example of moves was indeed a very "simplistic" effort, what I would like YOU to do now is to put into practice what you have learnt from this tutorial. Explore, map and note all the objects and treasures that you can locate in this excerpt. YOUR GOAL FOR ME IS TO OBTAIN A SCORE OF 55 POINTS BEFORE YOU KILL THE TROLL.

This challenge only applies to readers participating in THIS exercise. Should you decide to venture into the full length version of *Zork I* your tactics would be slightly different. (Hint: a certain treasure should perhaps go down into the Underground Empire with you).

REQUEST:

If participants of this exercise would like to share his/her results, I would most certainly like to receive them. *Zork's* directions can be interpreted in many ways and it would be interesting to publish some completed moves and maps. You can forward them to me: J A Salt, c/- The Australian Commodore Review, Top Rear, 4 Carrington Rd, Randwick NSW 2031. For this reason I have not included my completed Excerpt map as I did with *Planetfall* or *Infidel*. I would prefer you to attempt this mapping yourself and perhaps in a later issue we can publish your efforts,

I had intended to conclude this tutorial with the excerpt of *Zork I*. However I have since obtained a full length version of Infocom's mystery adventure *Witness* which is included on the sampler disk but in transcript only. So next issue we will explore *Witness* together. Happy Adventuring.

Anti-Reset Switch Routines

Tired of friends disposing of your beloved program at the press of a switch? Here's something that will give them a little shock. By ***Jason Briggs.***

I'm sure you've seen it before. You take one of your home grown games over to your friend's place, he plays a quick few games, snorts and hits his reset switch. You let out a little sob as the screen moves in, then the computer flicks back to that well known title screen. But wouldn't it be great if he hit his reset switch, the screen cleared, then displayed the message 'THAT WAS REALLY RATHER SILLY'. It's the type of thing that we use in the commercial games designing area. The reset-switch is used by pirates to copy a lot of software, so as games designers we must come up with a way of rendering these devices useless. And believe me, it's not that difficult.

Before we can dive into the heavy stuff, you have to understand how cartridges work. I know that this may seem very distant from reset-switches, but they are in fact linked in very closely. Let's look at what your C64 does when you turn it on.

(1) On power-up, the KERNAL first resets the stack pointer, and clears decimal mode.

(2) The KERNAL then checks for the presence of an autostart ROM cartridge at location 32768 ($8000). If this is present, then control is handed over to the auto-start cartridge.

Okay, hold it there!!! Let's think about this. First of all what does a reset-switch do when you hit it? Simple, all that it does is cause a short circuit. In other words turns the computer off, then on. It's also worth noting that SYS64738 will do the exact same thing. Secondly, if you were to shove a cartridge in, whilst pressing your reset-switch, then control would of course be handed over to the cartridge. Some of you by this stage may already have the idea, and some will not. To understand more clearly what I'm going to tell you it may help if you look at the power up routines in the KERNAL Rom (displayed below).

```
FCE2 LDX #$FF
FCE4 SEI
FCE5 TXS
FCE6 CLD
FCE7 JSR $FD02
FCEA BNE $FCEF
FCEC JMP ($8000)
FCEF STX $D016
FCF2 JSR $FDA3
FCF5 JSR $FD50
FCF8 JSR $FD15
FCFB JSR $FF5B
FCFE CLI
FCFF JMP ($A000)
FD02 LDX #$05
FD04 LDA $FD0F,X
FD07 CMP $8003,X
FD0A BNE $FD0F
FD0C DEX
FD0D BNE $FD04
FD0F RTS
FD10 C3,C2,CD,38,30
```

If you follow this routine through you'll see that it checks for five numbers located at $8004 (32772). These numbers are called CBM80, and are placed at $8004 when a cartridge is plugged into your 64. Now then, what do memory locations $8000 - $8003 do?

Well $8000 and $8001 are the low byte, hi byte values for where the cartridge program starts. $8002 and $8003 is the new address for the NMI's. That's the RESTORE key.

Many of you may be saying, "SO!" SO, we can fool the computer into thinking that it has a cartridge in place. Yes indeed, we could put in CBM80, then point $8000 and $8001 to our program. If you do this what will happen when somebody hits the reset-switch? Simple, the KERNAL Rom routine will first check for CBM80. Which it will find, mainly because we have just put it there. If the Rom routine does find CBM80 in place, then it will jump to the memory address stored in $8000 and $8001. And once again we have pre-adjusted these addresses to point to our program. Really rather easy, don't you think.

However, the program that you are pointing to must be written in Machine Language. For those of you who don't understand Machine Code, just flip to the end of this article. As for the rest of you, well, you can make your program do whatever you want it to. If you aren't too sure about which addresses to change, and how, then just take a look at the following example.

Above is the program that we will use against the reset-switch. If you read it through, you'll notice that it only changes the Border and Screen colours.

Another thing to note is where we have placed the routine in memory. For the sake of being neat I've put it right next to the CBM80 numbers. However, you could place this routine anywhere in memory that you felt like. Just as long as the numbers in $8000 and $8001, point to it correctly.

Now that we have the Machine Code routine all fixed up, we'll have to place the correct pointers and CBM80 into memory. This is quite a simple task, but I've still done it for you. (After all this is a demo, isn't it?)

$8000 - $09 - Low byte of the start address for our routine.

$8001 - $80 - Hi byte of the start address for our routine.

$8002 - $66 - Low byte of the start address for our NMI routine.

$8003 - $FE - Hi byte of the start address for our NMI routine.

$8004 - $C3,$C2,$CD,$38,$30 - CBM80

I'd had better call your attention to the fact that I have pointed the NMI's, that's RESTORE key, to the BRK routine. I've done this so that all of you BASIC guys, and gals, can still edit your

```
1000     *=$8009
1010     JSR $E544 ;CLEAR THE SCREEN
1020     LDX #$00  ;CLEAR THE X REGISTER
1030 START STX $D020 ;PUT X IN BORDER REGISTER
1040     STX $D021 ;PUT X IN SCREEN REGISTER
1050     INX       ;ADD ONE TO THE VALUE OF X
1060     JMP START ;JUMP TO THE BEGINNING OF THE LOOP
1070     .END
```

programs. However, this can be a rather big mistake at times. Once you have completed writing your program you need a way of locking out the RESTORE key. Well, don't worry about a thing. All you have to do is add two POKEs into your program. If you place in POKE32770,71:POKE32771,254 straight after the BASIC loader, it will render the RESTORE key harmless. Well, not harmless. If you do try hitting the RESTORE key, the computer will lock up.

Anyway, back to the task at hand. If we place all of those little numbers, pointers, and routines into those memory locations, then we will have an anti-reset switch computer. Not too bad is it? But don't take my word for it, Andrew (my esteemed leader) and most other people will tell you that I'm a #$/!%'&"%, and shouldn't be trusted.

So the following BASIC loader is for all of you out there who either; (A) don't understand Machine Code, or; (B) want to make sure that I'm not being all of those things above. Okay? Good! Type it in and use it. So next time your friend tries to dispose of your program he's in for a shock. And besides it makes you look like a real chip of the board. GET IT? Chip, board that was a joke! Wasn't it, Andrew? Oh, all right. If that's the way you all feel, I'll see you next month.

```
10 POKE55,255:POKE56,127:CLR
20 FORI=32768TO32791:READA:POKEI,A:NEXT
30 DATA9,128,102,254,195,194,205,56,48,32,68,229,162,0,142,32
40 DATA208,142,33,208,232,76,14,128
```


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Disk Logger Revisited

Paul Blair

***Paul Blair** explains about a new Disk Logger set up to make the most of the C128 and the 1571 disk drive.*

Many moons ago, back in the days when a PET with a 12 inch screen shouted your erudition (and depleted bank balance) to the world, I found a utility program named DISK LOGGER, written by the redoubtable Butterfield J. It was about then that disks became something other than square black things that were held (literally) with reverence, and fed to the gaping maw of a disk drive, there to whizz around and return to me my labours of many hours gone by. They became real, with a charm and personality all their own. They had structure, shape and lots of useful things to stare at and think about.

PET days were easy, apart from my appalling lack of knowledge. Most programs loaded into the computer at specific and easily recognized locations. Nevertheless, Jim's program was one of the keys to improvement, and I used it often to track down the contents of disks - especially those that I had mussed up somehow or other!

Each successive Commodore computer model brought its own disk logger program. By now, computers were getting a little more complex, and some idea of how people were stashing things inside them became more critical. The "evaluation copy" fraternity were becoming a force, and needed to know more. Most of the logger programs were rewrites of the original, with a few personal changes brought on by the addition of colour, and so on. Few, if any, changed the program's flow, because it was the sort of program where improvement was not needed.

The Commodore 128 changed that a bit, particularly when lashed up to a 1571 disk drive. New words like "burst" became more frequent in the articles we all read, and the Immers/ Neufeld combination convinced us that shoving some machine code into the disk drive could perform minor miracles if done correctly. So what could be made of all that?

```
100 REM: C128/1571 DISK LOGGER
110 REM: BASED ON JIM BUTTERFIELD'S ORIGINAL.
120 REM: BURST MODE USED TO LOAD DIRECTORY INTO
130 REM: C128 BETWEEN $3000-$4300. FILE LENGTHS
140 REM: ARE READ INTERNALLY IN THE 1571.
150 REM: 40/80 COLUMN SCREEN, BEST ON 80
160 :
170 REM: PAUL BLAIR *** 22 NOV 86
180 REM: 35 CALDER CRES, HOLDER ACT 2611, AUSTRALIA
190 REM: PUBLIC DOMAIN
200 REM: WRITE ME TO SEE HOW FAR IT TRAVELS
210 :
220 BU=0:TB=664:S=6143:ZZ$=CHR$(0):P=RGR(2)
230 Q=78:CL=6:FAST:IFP=0THENQ=39:CL=0:SLOW
240 COLORCL,16:COLOR4,16
250 SQ$="----------"
260 SR$="TR SC TYP LEN FILE NAME      DETAILS"
270 BS$=" 1  0 XXX   1 BOOT SECTOR"
280 PRINT"[CLS][BLK]C128/1571 DISK FILE LOG V1D / PAUL BLAIR"
290 PRINTSQ$:FORJ=0TO4:READT$(J):NEXT
300READA:IFA=-1THEN310:ELSES=S+1:POKES,A:GOTO300
310 INPUT"[DOWN]PRINTER   N[3LEFT]";Z$:Z=3:IFZ$="Y"THENZ=4
320 INPUT"UNIT     8[3LEFT]";U:POKE6161,U
330 INPUT"FILE SIZE  Y[3LEFT]";Z$:IFZ$="Y"THENF=1
340 OPEN4,Z:OPEN15,U,15,"U0L"
```

The simple answer is - a new Disk Logger (now you can let your breath go!) that is set up to make the most of the C128 and the 1571. Let me explain as we go along.

Fingers ready? Fine . . . A few notes to help me sometime in the future when I wonder just what I did.

```
350 PRINT"[DOWN]READING DIRECTORY":SYS6144:BANK0:
      PK=12288:REM $3000
360 IFPEEK(PK+3)=128THENTB=1328:REM 2 SIDES
370 OPEN15,U,15:IFFTHENGOSUB810
380 PRINT"[CLS]";:PRINT#4,"C128 DISK LOG OF-";
390 FORJ=1TO23:A$=CHR$(PEEK(PK+J+143)):PRINT#4,A$;:NEXTJ
400 PRINT#4:PK=PK+256:LT=0
410 PRINT#4,SR$:PRINT#4,SQ$:IFZ=3THENWINDOW0,3,Q,24,1
420 M=M+1:IFM=1THENNT=PEEK(PK):NS=PEEK(PK+1):IFNT=0THENLT=1
430 K=PEEK(PK+2)-128:IFK<1ORK>4THENK=0
```

The program uses a bit of machine code to speed things up. The first block (read in at line 300) is my version of a burst read routine, in this case to read in all of the directory on Track 18 to computer memory. This means that we have a lot of the information we need only a PEEK away.

This is where the directory action really begins. Line 390 gets the disk name and ID, so now we start looking through the part of the directory where program details are stored (Track 18, Sector 1 is the first such sector).

With the directory held in computer memory, we no longer have to GET our information from disk. We simply look around the stored directory, PEEKing at this and that to get what we want.

Having printed out the starting track and sector, the file type (SEQ, PRG...) and the filename, we can get down to work in earnest. To get the load address of PRG files, we need a couple of bytes off disk. We open the file, and read them in at line 560.

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Commodore 64/128

The $1000.00 Reward for completing *Sultan's Palace* has been claimed by Chris Hamilton of Wangi-Wangi, NSW.

"Even though the reward has gone I am convinced by the tremendous feedback I have had about the program that it will continue to do well and provide many happy hours of Adventuring to all those who (like myself) love playing Adventure/Arcade games."

Price has now been discounted to $19.95 and the game is available from:

Gary McCleary Software
PO Box 24,
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Commodore 64/128

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Listing explanations

If you have entered programs from various publications you will have often encountered numerous symbols and strange characters which are unique to Commodore computers.

These are usually special control codes which might tell your computer to clear the screen, change colours or position the cursor. They are difficult to reproduce in a magazine and can often lead to mistakes in entering a program.

Here is a handy list of the control code abbreviations used throughout this issue and all subsequent issues of this magazine. Without them we would have to fill up the program pages with the usual illegible reverse graphics symbols produced by Commodore printers.

Because so many readers have misunderstood this in other magazines let us spell it out in detail.

When you are entering any of the programs in this issue - or any other issue for that matter - type in the program as normal except when any abbreviations appear in brackets in a listing.

Then type the corresponding key strokes as listed in the example below.

```
10  rem explanation of listing
12  rem
14  print"{CLR} - shift and clr/home"
16  print"{HOME} - clr/home"
18  print"{C/DN} - cursor down"
20  print"{C/UP} - cursor up"
22  print"{C/RT} - cursor right"
24  print"{C/LF} - cursor left"
26  print"{BLK} - ctrl and black"
28  print"{WHT} - ctrl and white"
30  print"{RED} - ctrl and red"
32  print"{CYAN} - ctrl and cyan"
34  print"{PURP} - ctrl and purple"
36  print"{GRN} - ctrl and green"
38  print"{BLUE} - ctrl and blue"
40  print"{YELO} - ctrl and yellow"
42  print"{ORNG} - commodore and black"
44  print"{WHT} - commodore and white"
46  print"{RED} - commodore and red"
48  print"{CYAN} - commodore and cyan"
50  print"{PURP} - commodore and purple"
52  print"{GRN} - commodore and green"
54  print"{BLUE} - commodore and blue"
56  print"{YELO} - commodore and yellow"
58  print"{RVOF} - ctrl and rvs/off"
59  print"{RVON} - ctrl and rvs/on"
60  print"{F1} - function one"
61  print"{F2} - function two"
62  print"{F3} - function three"
63  print"{F4} - function four"
64  print"{F5} - function five"
65  print"{F6} - function six"
66  print"{F7} - function seven"
68  print"{F8} - function eight"
```

Reader Contributions

Many of our readers have inquired as to the acceptability of reader contributions. Well, the short answer is we will give consideration to most submissions provided they arrive in a format that is both readable and understandable.

Although we do have a swag of regular columnists, new talent is always waiting to be discovered - so please don't hesitate to send us your ideas, or contributions.

We produce a total of three computer magazines - *The Australian Commodore Review, The Australian Apple Review* and *Home Computer GEM* - so if you can't find a home in this publication, there may well be room elsewhere.

Submissions should be addressed to the attention of Andrew Farrell, and may be either typed double spaced on plain sheets of paper, or on IBM, Commodore or Apple Macintosh format disks. Alternatively you may with prior arrangement transfer copy directly into our computers via modem.

Style should be non-technical unless you are covering a specifically technical subject - in which case any obscure terminology should be fully explained.

Humour may be included in controlled doses. Try to be entertaining as well as informative.

If you include maps or diagrams they should be clearly labelled, and drawn in a dark black felt tip pen about twice the size you intend them to be reproduced. Freehand sketches tend to look twice as bad when printed, so use a straight edge on all lines that should be straight.

Labels should stand clear of the actual drawing so that we may typeset them if required.

We cannot accept responsibility for the loss of any materials, so don't send us your original. Make a copy, and if you're posting it, be sure to protect disks or photographs in a solid cardboard surround.

Payment for articles should be discussed with the editor, however as a rough guide they range between $40 and $60 per page of text. It won't make you rich, but there are a lot of other perks associated with writing for us. Be sure to include your home and work telephone numbers if you expect to be contacted with regard to any immediate queries - the editor rarely writes letters, not even to his own mother.

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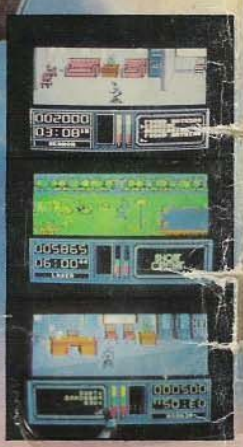

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